





Claim 12 (previously presented): The object-oriented virtual machine interface of claim 1,

said plurality of software objects comprising a searcher object, a code generation unit object, a finger object, a matched filter object, a combiner object, an uplink object and a downlink object; and

said plurality of kernels comprising a searcher kernel, a code generation unit kernel, a finger kernel, a matched filter kernel, a combiner kernel, an uplink kernel and a downlink kernel; wherein:

said searcher object is associated with said searcher kernel;

said code generation unit object is associated with said code generation unit kernel;

said finger object is associated with said finger kernel;

said matched filter object is associated with said matched filter kernel; said combiner object is associated with said combiner kernel;

said uplink object is associated with said uplink kernel; and

said downlink object is associated with said downlink kernel.

Claim 13 (original): An object-oriented reconfigurable system comprising an object-oriented virtual machine interface, a virtual machine and a reconfigurable apparatus,

said reconfigurable apparatus coupled to said virtual machine and comprising a plurality of kernels; and

said object-oriented virtual machine interface coupled to said virtual machine and comprising a plurality of software objects including a first subset of said software objects, each software object in said first subset of said software objects associated with a different kernel in said plurality of

kernels such that a change to a software object in said first subset of said software objects results in a change in said kernel associated with said software object.

Claim 14 (original): The object-oriented reconfigurable system of claim 13 wherein said plurality of software objects includes a second subset of said software objects, each software object in said second subset of said software objects having at least one adjustable attribute.

Claim 15 (original): The object-oriented reconfigurable system of claim 14 wherein said at least one adjustable attribute is a static or dynamic attribute.

Claim 16 (original): The object-oriented reconfigurable system of claim 13 further comprising:


an application program interface comprising a plurality of software routines, each software routine in said plurality of software routines representing a different communication protocol, wherein said plurality of software routines comprise software calls to said plurality of software objects; and

an application program comprising software calls to said plurality of software routines.

Claim 17 (original): The object-oriented reconfigurable system of claim 16 further comprising:

a compiler within said virtual machine to translate said application program into machine-readable instructions executable on said object-oriented reconfigurable system.

Claim 18 (original): The object-oriented reconfigurable system of claim 17 further comprising:

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a resource allocator within said object-oriented reconfigurable system, said resource allocator configured to receive said machine-readable instructions and issue a signal to configure a kernel in said plurality of kernels.

Claim 19 (original): The object-oriented reconfigurable system of claim 13 further comprising:

an application program for utilizing said plurality of software objects.

Claim 20 (original): The object-oriented reconfigurable system of claim 19 further comprising:

a compiler within said virtual machine to translate said application program into machine-readable instructions executable on said object-oriented reconfigurable system.

Claim 21 (original): The object-oriented reconfigurable system of claim 20 further comprising:

a resource allocator configured to receive said machine-readable instructions, and issue a command signal to control a kernel in said plurality of kernels.

Claim 22 (currently amended): The object-oriented reconfigurable system of claim 13 wherein a software object in said plurality of software objects is a searcher object, a code generation unit object, a finger object, an uplink object or a downlink object.

Claim 23 (original): The object-oriented reconfigurable system of claim 13,









Claim 37 (original): A computer program product for a reconfigurable object-oriented apparatus comprising a plurality of kernels and an interconnect structure for interconnecting said plurality of kernels, the computer program product comprising a computer readable storage medium and a computer program mechanism embedded therein, the computer program mechanism comprising:

instructions for instantiating a plurality of software objects, each software object in said plurality of software objects corresponding to a different kernel in said plurality of kernels such that a change to said software object results in a change in a state of said corresponding different kernel;

instructions for assigning an attribute value to a first software object in said plurality of objects according to a communication protocol; and

issuing machine-readable instructions to configure the kernel associated with said first software object in accordance with said attribute value.

Claim 38 (original): The computer program product of claim 37, wherein the computer program mechanism further comprising instructions for:

instantiating a plurality of software routines from an application program interface, said plurality of software routines representing a plurality of standards, wherein said plurality of software routines comprise software calls to said plurality of software objects.

Claim 39 (original): The computer program product of claim 37 wherein said plurality of software objects comprise:

a searcher object;

a code generation unit object;

a finger object;



producing machine readable data capable of reconfiguring said reconfigurable wireless network communication apparatus in accordance with said communication protocol; and

providing an object-oriented virtual machine interface having a plurality of software objects, each software object in said plurality of software objects associated with a different kernel in said plurality of kernels so that a change to a software object in said plurality of software objects results in a change in said kernel associated with said software object,

wherein said machine readable data includes a first software object selected from said plurality of software objects.

Claim 44 (canceled)

Claim 45 (currently amended):      The method of claim 44 ~~43~~ wherein said first software object is a function or procedure.

Claim 46 (currently amended):      A computer program product for use in conjunction with a reconfigurable wireless network communication apparatus, ~~said reconfigurable apparatus comprising having~~ a plurality of kernels, the computer program product comprising a computer readable storage medium and a computer program mechanism embedded therein, the computer program mechanism comprising:

a program module for reconfiguring said reconfigurable wireless network communication apparatus comprising:

instructions for parsing an application program that designates a communication protocol; and



